Formeln für die HB3er Prüfung Edition HB9T

APPROVED

$U_{eff} = U_{Spitze} \div \sqrt{2}$ (Effektive Spannung)

$U_{Spitze} = U_{eff} \times \sqrt{2}$ (Spitzenspannung)

$U_{Spitze-Spitz} = U_{eff} \times \sqrt{2} \times 2$ (Spitzen-Spitzen Spannung)

$f[MHz] = \frac{300}{\lambda[m]}$ (Frequenz aus Wellenlänge)

$\lambda[m] = \frac{300}{f[MHz]}$ (Wellenlänge aus Frequenz)

$\frac{1kHz}{1000Hz}$ $\frac{1MHz}{1000kHz}$ $\frac{1GHz}{1000MHz}$

([Accu] Serie R) $I_{ges} = I_1 = I_2 = I_x$ $U_{ges} = U_1 + U_2 + U_x$ $R_{ges} = R_1 + R_2 + R_x$

(Parallel – R) $I_{ges} = I_1 + I_2 + I_x$ $U_{ges} = U_1 = U_2 = U_x$ $R_{ges} = \frac{1}{\frac{1}{R_1}+\frac{1}{R_2}+\frac{1}{R_x}}$

(Spulen seriell) $L_{ges} = L_1 + L_2 + L_x$ (Spulen parallel) $L_{ges} = \frac{L_x + L_x}{2}$

$R_V = \frac{U_V \times U_L}{P}$ (Rv Lämpli)

$ü = \sqrt{\frac{R_1}{R_2}} = \frac{N_1}{N_2} = \frac{U_1}{U_2}$ (ANT-Übertrager-Trafo)

$PEP = P_T \times (1+m)^2$ (Trägerleistung)

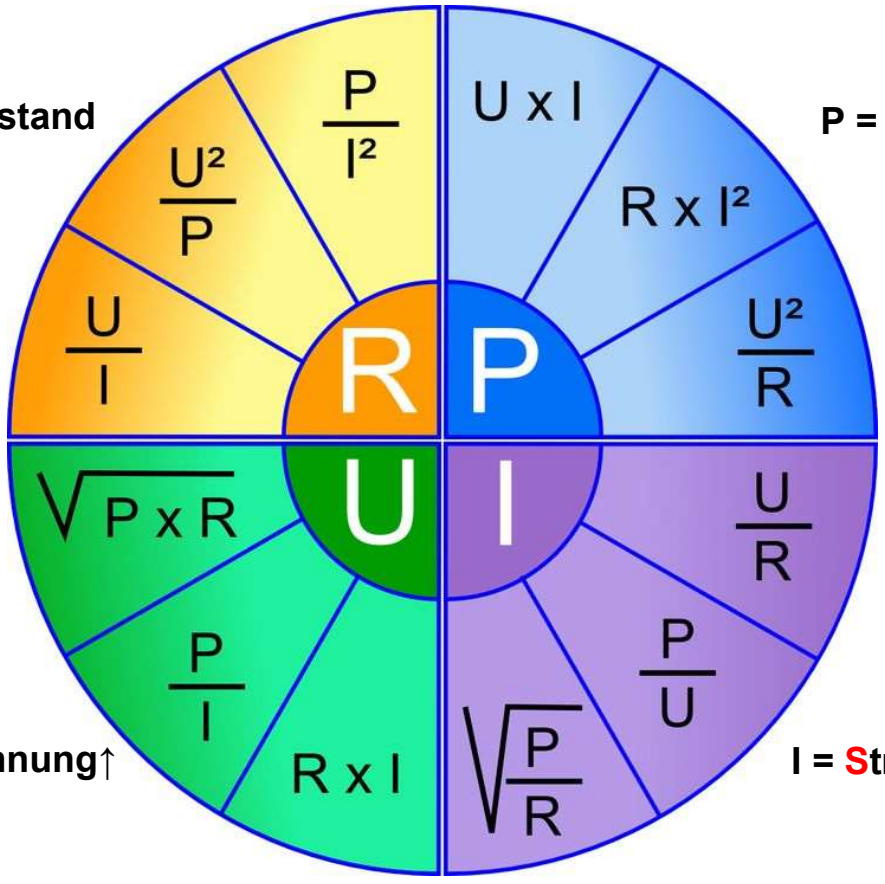
Bandbreiten:
AM = 2 × NFmax
FM = 2 x (Hub + NFmax)
SSB = NFmax − NFmin

$\frac{N_s}{U_S} \times U_p = N_p$ $\frac{N_p}{U_p} \times U_s = N_s$ $\frac{U_s}{N_s} \times N_p = U_p$ $\frac{U_p}{N_p} \times N_s = U_s$

N = Windungszahl U = Spannung p = primär s = sekundär

R = Widerstand
Ohm
Ω

P = Leistung
Watt
W



U = Spannung↑
Volt
V

I = Stromstärke
Ampere
A